

**Stantec Analytical Validation Checklist****Report No. ATI51**

Project Name: Amtrak North Yard	Project Number: 213402048	
Validator: Jim Tezak	Laboratory: Eurofins/Lancaster Laboratory	
Date Validated: 09/30/2019	Laboratory Project Number: 2015929 / ATI51	
Sample Start-End Date: 12/05/2018	Laboratory Report Date: 12/17/2018	
Parameters Validated: VOCs by USEPA Method TO-15		
Samples Validated: RSE-H Grab Air, ELLE # 9927717 RM 200 Grab Air, ELLE # 9927718 Hallway Mail Grab Air, ELLE # 9927719 MECH-H Grab Air, ELLE # 9927720 RM 119 Grab Air, ELLE # 9927721 RM 100 Grab Air, ELLE # 9927722 Basement-2 Grab Air, ELLE # 9927723 Basement-1 Grab Air, ELLE # 9927724 AA-1 Grab Air, ELLE # 9927725 RM 242 Grab Air, ELLE # 9927726 Rm 129A Grab Air, ELLE # 9927727		
<b>VALIDATION CRITERIA CHECK</b>		
Validation Flags Applicable to this Review: <b>U</b> The analyte was analyzed for, but not detected above the reported sample quantitation limit. <b>J</b> The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. <b>J+</b> Result is estimated quantity but the result may be biased high. <b>J-</b> Result is estimated quantity but the result may be biased low. <b>UJ</b> The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. <b>NJ</b> The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. <b>B</b> The analyte was detected in the method, field, and/or trip blank. <b>R</b> The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.		
1. Were all the analyses requested for the samples submitted with each COC completed by the lab?	Yes <b>X</b>	No
Comments: None		
2. Did the laboratory identify any non-conformances related to the analytical result?	Yes	No <b>X</b>
Comments: None		
3. Were sample Chain-of-Custody forms complete?	Yes <b>X</b>	No
Comments: None		

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4. Were samples received in good condition and at the appropriate temperature?	Yes <b>X</b>	No
Comments: The laboratory's Sample Administration Receipt Documentation Log notes that there were no custody seals present on shipping containers.		
5. Were sample holding times met?	Yes <b>X</b>	No
Comments: None		
6. Were correct concentration units reported?	Yes <b>X</b>	No
Comments: None		
7. Were detections found in laboratory blank samples?	Yes	No <b>X</b>
Comments: None		
8. Were detections found in field blank, equipment rinse blank, and/or trip blank samples?	Yes	No <b>X</b>
Comments: One field blank sample, AA-1, was submitted with this sample delivery group (SDG). There were no target analytes detected in the field blank.		
9. Were instrument calibrations within method criteria?	Yes	No
Comments: Not Applicable, Level II data validation.		
10. Were surrogate recoveries within control limits?	Yes	No
Comments: Not Applicable		
11. Were laboratory control sample(s) (LCS/LCSD) sample recoveries within control limits?	Yes <b>X</b>	No
Comments: None		
12. Were matrix spike (MS/MSD) recoveries within control limits?	Yes	No
Comments: Not applicable, site-specific MS/MSDs not analyzed.		
13. Were RPDs within control limits?	Yes <b>X</b>	No
Comments: LCS/LCSD RPDs were within acceptance criteria. Site-specific MS/MSDs were not analyzed.		
14. Were dilutions required on any samples?	Yes	No <b>X</b>
Comments: None		

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15. Were Tentatively Identified Compounds (TIC) present?	Yes	No
Comments: Not Applicable		
16. Were organic system performance criteria met?	NA X	No
Comments: None		
17. Were GC/MS internal standards within method criteria?	NA X	No
Comments: Not Applicable, Level II data validation.		
18. Were inorganic system performance criteria met?	NA X	No
Comments: Not Applicable		
19. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.	Yes	No X
Comments: Not Applicable		
20. Were at least 10 percent of the hard copy results compared to the Electronic Data Deliverable Results?	Yes X	No Initials JET
Comments: Samples in this SDG were analyzed for the full list of VOCs. Results were reported in the hard copy laboratory deliverable for 62 VOC analytes. The data table included only results for the following 11 analytes: trichloroethene; acetone; 2-butanone; 1,4-dichlorobenzene; chloroform; cis-1,2-dichloroethene; hexane; methylene chloride; pentane; tetrachloroethene; and vinyl chloride.		
21. Other?	Yes	No
Comments: All samples were validated according to the USEPA 2014 National Functional Guidelines (NFGs) and the Delaware Department of Natural Resources Standard Operating Procedures for Chemical Analytical Programs Under the Hazardous Substance Cleanup Act (DNREC HSCA SOPCAP. February 26, 2015).		
<b>PRECISION, ACCURACY, METHOD COMPLIANCE AND COMPLETENESS ASSESSMENT</b>		
Precision:	Acceptable X	Unacceptable Initials JET
Comments: None		
Sensitivity:	Acceptable X	Unacceptable Initials JET
Comments: None		
Accuracy:	Acceptable X	Unacceptable Initials JET
Comments: None		

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Representativeness:	Acceptable X	Unacceptable	Initials JET
Comments: None			
Method Compliance:	Acceptable X	Unacceptable	Initials JET
Comments: None			
Completeness:	Acceptable X	Unacceptable	Initials JET
Comments: None			